

**REMARKS**

Claims 1-21 are all the claims pending in the application. By this Amendment, Applicant amends claims 1, 2, and 15 to further clarify the invention. In addition, Applicant adds claims 18-21. Claims 18-21 are clearly supported throughout the specification *e.g.*, Fig. 2 and pages 4-6 of the specification.

**Preliminary Matter**

As a preliminary matter, Applicant thanks the Examiner for accepting the replacement drawing filed on August 19, 2004.

**Summary of the Office Action**

The Examiner withdrew the 35 U.S.C. § 112, second paragraph rejection. The Examiner, however, maintained the prior art rejections. Specifically, the Examiner rejected claims 1, 2, 4, and 6-9 under 35 U.S.C. § 102(e) and claims 3, 5, and 10-14 under 35 U.S.C. § 103(a).

Applicant respectfully incorporates by references, arguments submitted in the Amendment under 37 C.F.R. § 1.111 filed on March 29, 2005.

**Claim Rejection under 35 U.S.C. § 102(e)**

Claims 1, 2, 4, 6-9, 15, and 16 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,765,904 to Anandakumar et al. (hereinafter "Anandakumar"). Applicant respectfully traverses this rejection and respectfully requests the Examiner to reconsider this rejection in view of the following comments.

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Of the rejected claims, only claims 1, 2, and 15 are independent. Independent claim 1 is a unique combination of features, not disclosed by the prior art reference cited by the Examiner.

Claim 1 requires:

wherein only said data sink reports to said data source on said network status information of said communications network in a neighbourhood around the data sink, and wherein no intermediate network node reports to said data source on said network status information of said communication network...

The Examiner asserts that claim 1 is directed to a network status reporting method and is anticipated by Anandakumar. Specifically, the Examiner asserts that Anandakumar's report message sent from the destination to the source are equivalent to the sink reporting to the source information on the communication network in its neighborhood. Applicant has carefully studied Anandakumar's teachings of the reporting messages, which lack reporting information about the communication network in the neighborhood of the sink node that would exclude the intermediate nodes reporting to the data source on said network status information of the communication network.

Specifically, the Examiner alleges that Applicant's specification defines the network status information in the neighborhood of the sink to be a quality of a signal received by the data sink that may be observed by monitoring loss of frames or bit error rate at the data sink. Accordingly, the Examiner reasons that since Anandakumar teaches reporting the quality of signal received by the receiver 361', Anandakumar meets the unique features of claim 1 (*see* page 8 of the Office Action).

Applicant respectfully submits that page 3, lines 5 to 19 of the specification recite:

The network status is determined based on the current data transmission rate on the line between the line termination element and the network termination element in an access network within the communication network. In case of a rate adaptive digital subscriber line network the RADSL model and the RADSL Digital Subscriber line Access Multiplexer (re-)negotiate an upstream and downstream data rate over the line in between. In this situation the network neighborhood of the data sink is the ADSL line in between the ADSL modem and ADSL DSLAM. The status of this ADSL line may be the data rate. Another network status in its neighborhood may be the quality of signal received by the data sink that may be observed by monitoring loss of frames or bit-error rate at the data sink. (emphasis added).

Accordingly, it is respectfully submitted that specification provides ample support for the network status information not to include the entire network between the data source and the data sink but rather to only include a current transmission rate on the line between the line termination element and the network termination element in an access network within the communication network, for example. It is respectfully submitted that the example provided in the specification on page 3, lines 13-15 is misapplied in this Final Office Action. For example, the status of the ADSL line may be the quality of signal received by the DSLAM or RADSLM on the line connecting DSLAM with the RADSLM (depicted in Fig. 1). That is, the network status information is still about the network in the neighborhood of the data sink.

Moreover, the above quoted passages is provided by way of an example (“another network status....may be”) and not by way of a limitation, and in accordance with MPEP, although the claims are interpreted in light of the specification, features in the specification are not imported as limitations into the claims.

It will be appreciated that the foregoing remarks relate to the invention in a general sense, the remarks are not necessarily limitative of any claims and are intended only to help the Examiner better understand the distinguishing aspects of the claims mentioned above.

In addition, the Examiner alleges that col. 23, line 67 to col. 24, line 4 of Anandakumar discloses the network status information in a neighborhood around the data sink as defined in claim 1. Col. 23, line 67 to col. 24, line 4 of Anandakumar recites:

In addition block 381' calculates the QoS measure, such as packet loss ration as described earlier hereinabove. Lost Packet block 381' in the destination also supplies the RTCP packetizer 395' the QoS measure which packetizer 395' incorporates into the payload of return RTCP packets and sends them to control block 331.

As is visible from the passage above, Anandakumar only discloses having two nodes connected via a packet network and having one node calculate packet loss ration experienced by this node in this packet network and sending the report to the other node. That is, in Anandakumar, the block 381' calculates the QoS measure, such as packet loss ratio, in the destination and supplies them to the RTCP packetizer 395'. The packetizer 395' incorporates this QoS measures into the payload of return RTCP packets and sends these packets to the control block 331. The path of communication from the Lost Packet Compensation 381' to the Rate/Diversity control block 331 may be a packet network 351, *i.e.*, a satellite network, a wireless network, PSTN, etc. (Fig. 3; col. 23, line 55 to col. 24, line 44).

Anandakumar's report packets, however, carry information about the entire network. That is, Anandakumar's report packets carry information about the path from the source to the sink (destination computers) and not about the network around the destination computer.

Anandakumar, for example, teaches that the report packets identify a number of lost packets thereby providing a QoS measurement and delay jitters (col. 25, line 4 to col. 26, line 34). In other words, in Anandakumar, the destination computer does not provide the status information on the network around the destination computer but rather provides the QoS for the entire network between the source and the sink.

Since Anandakumar only teaches reporting QoS between the source and destination and fails to teach the QoS to provide information about a portion of the network around the destination computer, the rejection is improper as it lacks “sufficient specificity” required under § 102.

Moreover, the rejection is improper as Anandakumar fails to teach or suggest that “no intermediate network node reports to said data source on said network status information of said communication network.” There is no teaching or suggestion in Anandakumar as to whether the intermediate nodes report or not report the network status information. In short, Anandakumar lacks sufficient specificity for this unique feature of claim 1.

“[A]nticipation under § 102 can be found only when the reference discloses exactly what is claimed and that where there are differences between the reference disclosure and the claim, the rejection must be based on § 103 which takes differences into account.” *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985); MPEP § 2131.

Therefore, “wherein only said data sink reports to said data source on said network status information of said communications network in a neighbourhood around the data sink, and wherein no intermediate network node reports to said data source on said network status

information of said communication network” as set forth in claim 1 is not disclosed by Anandakumar, which lacks having the receiver computer report status information of the communication network in its neighbourhood. Moreover, in Anandakumar, there is no teaching or suggestion on whether the intermediate nodes report or not the status information of the communication network. For at least these exemplary reasons, independent claim 1 is patentably distinguishable from Anandakumar and it is appropriate and necessary for the Examiner thus to withdraw this rejection of independent claim 1.

Independent claims 2 and 15 contain features that are similar to the features argued above with respect to claim 1, and those arguments are respectfully submitted to apply with equal force here. For at least analogous exemplary reasons, therefore, Applicant respectfully requests the Examiner to withdraw this rejection of independent claims 2 and 15, and dependent upon claim 2, claims 4, and 6-9 and dependent upon claim 15, claim 16.

In addition, independent claim 15 recites: “a data sink reporting to a data source status information of a first communication network connected to the data sink; at least one intermediate network node transmitting said report in a second communication network connected to the data source...wherein only said data sink reports to said data source on said status of said first communications network, and none of said at least one intermediate network node report to said data source on said network status of said second communications network near said at least one intermediate network node.” Anandakumar fails to teach or suggest two networks as set forth in claim 15. Moreover, Anandakumar fails to teach or suggest a report having information about a first communication network connected to the data sink, and

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forwarding the report to the data source in a second communication network. Indeed, in Anandakumar, only packet loss ratio of the network, connecting the destination computer and the data source, is provided to the data source. Accordingly, for at least these additional exemplary reasons, claim 15 patentably distinguishes from Anandakumar.

Claim Rejections under 35 U.S.C. § 103(a)

Claims 3, 5, 10-14, and 17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Anandakumar in view of U.S. Patent No. 6,349,096 to Liu et al. (hereinafter “Liu”).

Applicant respectfully traverses in view of the following comments.

Claims 3 and 5 depend on claim 2 and claims 11-14 on claim 10. Applicant has already demonstrated that Anandakumar fails to teach or suggest the unique features of claim 2. Applicant respectfully submits that Liu does not cure the deficient teachings of Anandakumar for the reasons detailed below. Accordingly, claims 3 and 5 are patentable at least by virtue of their dependency on claim 2.

Claim 10 recites: “wherein the data source adapts the transmission rate on the basis of a network status reported by at least one of the line termination element and the network termination element, and wherein the network status is determined based on a quality of signal of the first network only.” The Examiner acknowledges that Anandakumar does not teach or suggest at least this unique feature of claim 10. The Examiner, however, alleges that Liu cures the deficient teachings of Anandakumar.

Specifically, the Examiner alleges that Liu teaches a data source 231, the line termination element 240 (right DSLAM in the Figure 2) and the network termination element 230. The

Examiner further alleges that the data source 231 decides the available rate based on the line quality of DSL 225 and that *inherently* the data source receives a report of the destination's network status (*see* page 8 of the Office Action). Applicant respectfully disagrees. Applicant first addresses the Examiner's allegation in regards to how the data source decides the available rate and then the alleged inherent feature of the report being sent to the source.

Liu discloses a system with a dynamic configuration to achieve an optimal routing path for an end-to-end data link connection. An optimal data path can be determined by a digital subscriber loop (DSL) user based on particular bandwidth requirements, data rate cost constraints, and/or data delay requirements. The data path can be set up to include one or more data routes, including the regular digital public switching telephone network (PSTN), a wide area networks (WAN), or virtual permanent circuit links via digital cross-connects (DCS) (*see Abstract*, col. 4, lines 4 to 20).

In particular, Liu teaches that if the user opted a routing through WAN 260, the WAN call setup process 430 can be used to connect an end-to-end packet-switching link. In Liu, the call is set up as follows:

- a) The user first decides and requests a target data rate X.
- b) In response, the CPE 230 and DSLAM 240 decide the available rate Y for the DSL 225 connecting the CPE 230 and DSLAM 240 (Fig. 4C, step 432). This determination is made by taking into consideration, among other things, the caller requested target rate, line quality of DSL 225, etc. (col. 9, lines 47 to 51).



c) The call request is then propagated to a remote DSLAM 240' of the remote CO. The remote DSLAM 240' performs steps (a) and (b) to obtain an acceptable rate Z on the DSL 225' between the CPE 231 and DSLAM 240' (Fig. 4C, steps 433 and 434; col. 9, lines 52 to 57).

d). Depending on the result, the DSLAM 240 then selects R as the lower of data rates Y and Z as the tentative achievable rate for the overall data link. Accordingly, the WAN 260 then allocates and sets up the packet connection by trying to meet the above data rate R and sends the final rate to both the calling and called parties (Fig. 4C; col. 9, line 59 to col. 10, line 3).

As explained above, Liu only teaches that the CPE 230 and the DSLAM 240 decide the available rate Y for the network DSL 225 by taking into consideration the line quality of the DSL 225. Same procedure is executed by CPE 231' and DSLAM 240' to decide the available rate Z for the DSL 225'. That is, the line quality is taken into consideration in determining the rate for that same line DSL 225'.

In other words, if the Examiner's position is that: a) the CPE 231 of Liu is allegedly the data source, b) the DSLAM 240 of Liu is allegedly the line termination element, and c) the CPE 230 of Liu is allegedly the network termination element (*see* page 8 of the Office Action), then the first network is DSL 225 and the second network is a combination of the DSL 225' line and the WAN line. Then clearly the CPE 231 does not use and does not receive a report of the available rate of the DSL 225 (*see* Fig. 4C, step 434, col. 9, lines 53 to 56).

The Examiner reliance on col. 9, line 51 is improper as it contains typographical errors. Col. 9, line 51 recites: "at CPE 231 and DSLAM 245," whereas it should recite: "at CPE 230 and DSLAM 240" as is visible from Fig. 4C, step 432 and Fig. 2. One of ordinary skill in the art

would readily understand that as depicted in Fig. 4C, the CPE 230 and not CPE 231 negotiates with DSLAM 245 to establish transmission rate Y and CPE 231 negotiates with DSLAM 245' to establish a transmission rate Z.

With respect to the Examiner's inherency argument, Liu only teaches setting up a call via WAN and not reporting status of the network. The Examiner alleges that the CPE 231 must receive reports of the DSL 225 (*see* page 8 of the Office Action). Applicant respectfully disagrees.

Under the doctrine of "inherency," if an element is not expressly disclosed in a prior art reference, the reference will still be deemed to anticipate a subsequent claim if the missing element "is necessarily present in the thing described in the reference" *Cont'l Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1268, 20 U.S.P.Q.2d 1746, 1749 (Fed. Cir. 1991). "Inherent anticipation requires that the missing descriptive material is '**necessarily present,**' **not merely probably or possibly present,** in the prior art." (emphasis added) *Trintec Indus., Inc. v. Top-U.S.A. Corp.*, 295 F.3d 1292, 1295, 63 U.S.P.Q.2d 1597, 1599 (Fed. Cir. 2002); *see also* MPEP §2112.

Liu discloses using the determined rates Y and Z for the networks DSL 225 and DSL 225', respectively, to select the lowest of the two rates for the WAN network 260 (col. 9, lines 48 to 67). That is, at CPE 231 and DSLAM 245', the rate Z is determined based on the requested target rate X and line quality of the line 225' (col. 9, lines 48 to 58). Since, the CPE 231 and DSLAM 245' (Fig. 2) are connected to each other via line 225', no reports are needed as the CPE 231 and DSLAM 245' can each monitor the quality of the line 225'. Accordingly, it is not

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a necessity for the CPE 231 to receive reports because the CPE 231 is connected to the line 225' and can itself monitor the line 225'. In short, in Liu, there are no reports as set forth in claim 10. In sum, Liu does not cure the deficient teachings of Anandakumar.

Therefore, "wherein the data source adapts the transmission rate on the basis of a network status reported by at least one of the line termination element and the network termination element, and wherein the network status is determined based on a quality of signal of the first network only," as set forth in claim 10 are not suggested or taught by the combined teachings of Anandakumar and Liu, which lack having the data source adapt the transmission rate on the basis of the report of the network status information of the destination's network.

For at least these exemplary reasons, claim 10 is patentable over the combined teachings of Anandakumar and Liu. Claims 11-14 and 17 are patentable at least by virtue of their dependency on claim 10.

Therefore, Applicant respectfully requests the Examiner to withdraw this rejection of claims 3, 5, 10-14, and 17.

#### New Claims

In order to provide more varied protection, Applicant adds claims 18-21. Claims 18-21 are patentable at least by virtue of their dependency on claims 15.

#### Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. **If any points remain in issue, the**

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**Examiner is respectfully requested to contact the undersigned attorney at the telephone number listed below.**

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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